REMARKS

Claims 1-21 are pending in this application. By this amendment, Applicants amend claims 1, 11 and 21.

Claims 1-8 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lopez et al. (U.S. 5,132,647). In addition, claims 11-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kato et al. (U.S. 5,140,497). And claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lopez et al. in view of Kato et al. Applicants respectfully traverse these rejections.

Claim 1 has been amended to recite:

> "An input-output balanced filter comprising:
> **first and second input terminals and first and second output terminals**;
> a first LC filter circuit unit including a common side line, **said first LC filter circuit unit being connected between said first input terminal and said first output terminal**;
> a second LC filter circuit unit including a common side line , **said second LC filter circuit unit being connected between said second input terminal and said second output terminal**;
> a common line;
> wherein **said common side line of said first LC filter circuit unit is electrically and directly connected to said common side line of said second LC filter circuit unit via said common line**; and
> **an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units**." (Emphasis added)

The input-output balanced filter according to the present claimed invention is a differential type filter for use in, for example, a balanced circuit, and has a filter function for a balanced signal and a transfer function for impedance of the balanced signal. Particularly, with the unique combination and arrangement of element in the input-output balanced filter according to the present claimed invention, the balanced signal input between the first and second terminals is filtered and then subjected to impedance transformation so as to be output between the first and second output terminals.

In contrast to the present claimed invention, Lopez et al. teaches a bandpass filter used in an unbalanced circuit including **only** a single input terminal Vi and a single

output terminal Vo. Thus, Lopez et al. clearly fails to teach or suggest "a first LC filter circuit unit including a common side line, **said first LC filter circuit unit being connected between said first input terminal and said first output terminal**" and "a second LC filter circuit unit including a common side line , **said second LC filter circuit unit being connected between said second input terminal and said second output terminal**" as recited in the present claimed invention.

Additionally, the Examiner alleged that Lopez et al. teaches "the common side line of the first LC filter circuit unit is connected to the common side line of the second LC filter circuit unit via the common line (see col. 5, lines 23-56)." However, col. 5, lines 23-56 fail to teach or suggest **ANY** common line, and certain fail to teach or suggest "said common side line of said first LC filter circuit unit is electrically and directly connected to said common side line of said second LC filter circuit unit via said common line" as recited in claim 1 of the present application.

Furthermore, Lopez et al. fails to teach or suggest **ANY** common line, and thus, certainly fails to teach or suggest "an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units" as recited in the present claimed invention.

Accordingly, Applicants respectfully submit that Lopez et al. fails to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application.

Claim 11 has been amended to recite:

> An input-output balanced filter comprising:
> a plurality of insulating layers;
> **first and second input terminals and first and second output terminals**;
> **a first LC filter circuit unit connected between said first input terminal and said first output terminal** and having a plurality of first coil conductive patterns, first capacitor conductive patterns and a common side line;
> **a second LC filter circuit unit connected between said second input terminal and said second output terminal** and having a plurality of second coil conductive patterns, second capacitor conductive patterns and a common side line; and

a common line conductive pattern;

wherein said common side line of said LC filter circuit unit is electrically and directly connected to said common side line of said second LC filter circuit unit via said common line conductive pattern; and

an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units." (Emphasis added)

Claim 21 recites features that are similar to the features recited in claim 11, including the emphasized features.

In contrast to the present claimed invention, Kato et al. teaches a bandpass filter used in an unbalanced circuit including **only** a single input terminal 18b and a single output terminal 18c (see col. 5, lines 8-20). Thus, Kato et al. clearly fails to teach or suggest "a first LC filter circuit unit connected between said first input terminal and said first output terminal" and "a second LC filter circuit unit connected between said second input terminal and said second output terminal" as recited in the present claimed invention.

Furthermore, Kato et al. fails to teach or suggest anything about the common phase reference point of first and second LC filter circuit units, and certain fails to teach or suggest "an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units" as recited in the present claimed invention.

Accordingly, Applicants respectfully submit that Kato et al. fails to teach or suggest the unique combination and arrangement of elements recited in claims 11 and 21 of the present application.

In view of the foregoing remarks, Applicants respectfully submit that claims 1, 11 and 21 are allowable. Claims 2-10 and 12-20 depend upon claims 1 and 11, respectively, and are therefore allowable for at least the reasons that claims 1 and 11 are allowable.

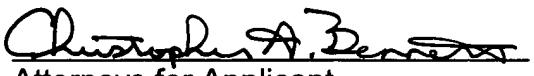
In view of the foregoing Amendment and Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt

allowance are respectfully solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: August 28, 2002



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. An input-output balanced filter comprising:

first and second input terminals and first and second output terminals;

a first LC filter circuit unit including a common side line, said first LC filter circuit unit being connected between said first input terminal and said first output terminal;

a second LC filter circuit unit including a common side line, said second LC filter circuit unit being connected between said second input terminal and said second output terminal;

a common line;

wherein said common side line of said first LC filter circuit unit is electrically and directly connected to said common side line of said second LC filter circuit unit via said common line; and

an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units.

11. An input-output balanced filter comprising:

a plurality of insulating layers;

first and second input terminals and first and second output terminals;

a first LC filter circuit unit connected between said first input terminal and said first output terminal and having a plurality of first coil conductive patterns, first capacitor conductive patterns and a common side line;

a second LC filter circuit unit connected between said second input terminal and said second output terminal and having a plurality of second coil conductive patterns, second capacitor conductive patterns and a common side line; and

a common line conductive pattern;

wherein said common side line of said LC filter circuit unit is electrically and directly connected to [a] said common side line of said second LC filter circuit unit via said common line conductive pattern; and

an approximate midpoint of said common line is defined as a common phase reference point of each of said first and second LC filter circuit units.

21. An input-output balanced filter comprising:

a first LC bandpass filter circuit unit including a plurality of LC parallel resonant circuits electromagnetically connected to one another;

a second bandpass filter circuit unit including a plurality of LC parallel resonant circuits electromagnetically connected to one another;

an inductor for electrically and directly connecting a common side line of the first LC bandpass filter circuit unit to a common side line of the second LC bandpass filter circuit unit;

[an] first and second input terminals provided with one of the LC parallel resonant circuits of the first LC bandpass filter circuit unit and one of the LC parallel resonant circuits of the second LC bandpass filter circuit unit, respectively;

[an] first and second output terminals provided with another of the LC parallel resonant circuits of the first LC bandpass filter circuit unit and another of the LC parallel resonant circuits of the second LC bandpass filter circuit unit, respectively; wherein

an approximate midpoint of the common line is defined as a common phase reference point of each of the first and second LC bandpass filter circuit units.